

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application.

I. Disposition of Claims

Claims 1-10 and 12-14 are currently pending in the present application. Claims 1, 5, 9, and 13 have been amended.

II. Claim Amendments

Independent claim 1 has been amended to recite that the clock driver is disposed outside a region of the clock grid. Further, independent claim 1 has been amended to remove the limitation of the at least one clock signal line connecting an output of the clock driver to the clock grid, where the at least one clock signal line resides at a non-exterior region of the clock grid. Further, independent claim 1 has been amended to recite that the at least interconnect is arranged to propagate a signal from an output of the clock driver past an exterior region of the clock grid to a connection point residing at a non-exterior region of the clock grid. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figures 4a and 5 of the present application.

Independent claim 5 of the present application has been amended to recite that the clock driver resides outside a region of the clock grid. Further, independent claim 5 of the present application has been amended to remove the limitation of the transmission

structure operatively connecting an output of the at least one clock driver to at least one point on the clock grid, wherein the transmission structure resides at a non-exterior region of the clock grid, and wherein the at least one point resides at the non-exterior region of the clock grid. Further, independent claim 5 of the present application has been amended to recite that the transmission structure is arranged to carry to carry the clock signal from an output of the at least one clock driver past an exterior region of the clock grid to at least one point residing at a non-exterior region of the clock grid. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figures 4a and 5 of the present application.

Independent claim 9 of the present application has been amended to recite that the clock driver resides outside a region of the clock grid. Further, independent claim 9 of the present application has been amended to remove the limitation of a transmission structure. Further, independent claim 9 has been amended to recite that the clock signal is propagated from an output of the clock driver past an exterior region of the clock grid to the connection point. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figures 4a and 5 of the present application.

Independent claim 13 of the present application has been amended to recite that the clock driver resides outside of a region of the clock grid. Further, independent claim 13 of the present application has been amended to remove the limitation that the transmission structure resides at a non-exterior region of the clock grid. Further, independent claim 13 of the present application has been amended to recite that the interconnect connects the clock driver past an exterior region of the clock grid to a

connection point residing at a non-exterior region of the clock grid. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figures 4a and 5 of the present application.

II. Objection(s) to Abstract

The Abstract of the present application was objected to for containing "connect" in place of "connects" in line 2 and omitting "of" after "regions" in line 3. The Abstract has been amended in view of these objections. Accordingly, withdrawal of the objection to the Abstract of the present application is respectfully requested.

III. Objection(s) to Drawings

The drawings of the present application were objected to due to the third waveform in Figure 4c of the present application being labeled as "Clock Signal at p1." Figure 4c of the present application has been corrected to indicate the third waveform as being "Clock Signal at p2." The corrected version of Figure 4c of the present application has been submitted with this reply together with a separate letter to the official draftsman. Accordingly, withdrawal of the objection to the drawings of the present application is respectfully requested.

IV. Rejection(s) under 35 U.S.C § 112

Claims 1-4 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. For the reasons set forth below,

reconsideration of this rejection is respectfully requested.

Independent claim 1 of the present application has been amended to recite that an interconnect is arranged to propagate a signal from an output of the clock driver over an exterior region of the clock grid to a connection point residing at a non-exterior region of the clock grid. Thus, it is clear that the signal is propagated on, or carried by, the interconnect, which is the physical means connecting the output of the clock driver to the clock grid. Thus, amended independent claim 1 of the present application is not indefinite. Dependent claims 2-4 are no longer indefinite for at least the same reasons. Accordingly, withdrawal of the § 112 rejection of independent claim 1 of the present application is respectfully requested.

V. Rejection(s) under 35 U.S.C § 102

Claims 1-10 and 12-14 of the present application were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,311,313 issued to Camporese et al. (hereinafter "Camporese"). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is directed to a design for reducing clock skew by providing a clock signal to a clock grid at non-exterior regions of the clock grid. Amended independent claims 1, 5, 9, and 13 of the present application require, in part, that (1) the clock driver used to drive the clock signal reside outside a region of the clock grid and (2) the clock signal be driven from the clock driver past an exterior region of the clock grid to a non-exterior region of the clock grid. For example, as shown in the exemplary embodiments of the present invention shown in Figures 4a and 5 of the present

application, a clock driver 40, which resides outside of a region of a clock grid 42, drives a signal along interconnect 46 that go from an output of the clock driver 40 past, or around or over, an exterior region of the clock grid 42 to a connection point residing at a non-exterior region of the clock grid 42.

Camporese, in contrast to the present invention, fails to disclose an arrangement as recited in amended independent claims 1, 5, 9, and 13 of the present application. For example, as shown in Figure 1A of Camporese, the clock drivers 110 are connected to exterior regions of the clock grid 111. Thus, the clock drivers 110 cannot and do not drive a signal past an exterior region of the clock grid 111 as required by amended independent claims 1, 5, 9, and 13 of the present application. Moreover, with reference to Figure 2 of Camporese, not only do the clock drivers 202 not reside outside a region of the clock grid as required by amended independent claims 1, 5, 9, and 13 of the present application, but also, the clock drivers 202 do not and cannot drive a signal, or are even provided with a structure (e.g., interconnect) for, propagating a signal from the clock driver past an exterior region of the clock grid as required by amended independent claims 1, 5, 9, and 13 of the present application. Thus, Camporese fails to disclose an arrangement in which clock drivers positioned outside of a region of a clock grid drive a clock signal past an exterior region of the clock grid to a non-exterior region of the clock grid as required by amended independent claims 1, 5, 13, and 19 of the present application.

In view of the above, Camporese fails to show or suggest the present invention as recited in amended independent claims 1, 5, 9, and 13 of the present application. Thus, amended independent claims 1, 5, 9, and 13 are patentable over Camporese. Dependent

claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

VI. Conclusion

Applicant believes this reply to be fully responsive to all outstanding issues and place this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03226.136001;P6821).

Date: _____

8/1/03

Respectfully submitted,



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